

PTO 09 DEC 2000

REPLACED BY
ART 34/AMPT

What is claimed is:

1. A processing device comprising:
 - a chamber (12);
 - 5 a mounting table (16), disposed in the chamber (12),
for mounting thereon an object to be processed; and
 - a gas supply port (19) for supplying a gas into the
chamber (12), the gas supply port (19) being provided at a
surface (12b) of the chamber (12);
 - 10 wherein the mounting table (16) is disposed
substantially parallel to the surface (12b) of the chamber
(12); and
 - in a substantially vertical cross section of the
chamber (12) taken along a flow of the gas from the gas
15 supply port (19) toward the object to be processed, a
sidewall (12d) of the chamber (12) abutting on the surface
(12b) of the chamber forms an angle greater than 90° with
the surface (12b) of the chamber.
- 20 2. The processing device of claim 1, wherein the gas
supply port (19) is configured to have a substantially same
area as that of the object to be processed.
3. The processing device of claim 1, wherein in a
25 substantially vertical cross section of the mounting table
(16) taken along the flow of the gas from the gas supply

port (19) toward the object to be processed, a mounting surface on which the object to be processed is mounted forms an angle greater than 90° with a side surface of the mounting table (16) abutting on the mounting surface.

5

4. The processing device of claim 3, wherein in a substantially vertical cross section of the chamber (12) and the mounting table (16) taken along the flow of the gas from the gas supply port (19) toward the object to be processed, the sidewall (12d) of the chamber is configured to be substantially parallel to the side surface of the mounting table (16).

5. The processing device of claim 4, wherein in a substantially vertical cross section of the chamber (12) and the mounting table (16) taken along the flow of the gas from the gas supply port (19) toward the object to be processed, the distance between the sidewall (12d) of the chamber and the side surface of the mounting table (16) is set to be less than the distance between the surface (12b) of the chamber and the object to be processed.

6. A processing device comprising:
a chamber (12);
a mounting table (16), disposed in the chamber (12),
for mounting thereon an object to be processed; and

a gas supply port (19) for supplying a gas into the chamber (12), the gas supply port (19) being provided at a surface (12b) of the chamber (12);

5 wherein the mounting table (16) is disposed substantially parallel to a flow direction of the gas supplied from the gas supply port (19); and

in a substantially vertical cross section and/or a substantially horizontal section of the chamber (12), a sidewall (12d) of the chamber (12) abutting on the surface
10 (12b) of the chamber forms an angle greater than 90° with the surface (12b) of the chamber.

7. A processing device comprising:

a chamber (12);

15 a mounting table (16), disposed in the chamber (12), for mounting thereon an object to be processed;

a gas supply port (19) for supplying a gas into the chamber (12), the gas supply port (19) being provided at a surface (12b) of the chamber (12); and

20 a gas exhaust port (13) for evacuating the chamber (12);

wherein the chamber (12) is constructed such that a cross sectional area of a flow passageway along which the gas supplied from the gas supply port (19) flows to reach a
25 vicinity of the object to be processed is gradually increased as the gas flows therealong and a cross sectional

area of a flow passageway along which the gas reaches the gas exhaust port (13) after passing through the vicinity of the object to be processed is gradually decreased as the gas flows therealong.

5

8. A method for processing a substrate disposed in a chamber while changing an atmosphere in the chamber by alternately supplying a plurality of gas species from a gas supply port into the chamber, comprising:

10 a gas supply step for supplying a gas from the gas supply port into the chamber; and

a speed change step for gradually increasing a speed of the gas after passing through a vicinity of the substrate with respect to a speed of the gas passing the vicinity of the substrate along a flow direction of the gas supplied in the gas supply step.

9. The processing method of claim 8, wherein at the speed change step, a cross sectional area of a flow passageway of the gas after passing through the vicinity of the substrate is smaller than that of a flow passageway of the gas passing through the vicinity of the substrate in the chamber.